



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,851	08/04/2003	David J. Corisis	2884.6US (96-0291.06/US)	5688
24247	7590	01/02/2004	EXAMINER	
TRASK BRITT			MAGEE, THOMAS J	
P.O. BOX 2550			ART UNIT	
SALT LAKE CITY, UT 84110			PAPER NUMBER	
			2811	

DATE MAILED: 01/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/633,851

Applicant(s)

CORISIS ET AL.

Examiner

Thomas J. Magee

Art Unit

2811

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on November 7, 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-10, and 12-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4 is/are allowed.
- 6) ☒ Claim(s) 1,2,5-10 and 12-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 08042003. 6) ☐ Other:

DETAILED ACTION

Claim Cancellations

1. Applicant's cancellation of Claims 3 and 11 in Letter No. 11042003 is acknowledged.

Claims 1, 2, 4 – 10, and 12 – 15 are active and still pending.

Claim Rejections – 35 U.S.C. 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2, 5 – 10, and 12 – 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Beng et al.

4. Regarding Claims 1 and 2, Beng et al. disclose (Col. 2, line 23 – Col. 3, line 19) (Figures 1 and 2) a lead frame with a plurality of lead frames for a semiconductor device (11), with a first surface having a bond pad (18) and a bottom surface, each lead frame located adjacent another lead frame with an opening therebetween, containing a plurality of lead fingers (12,13), each lead finger having an end and defining an opening for accommodating a semiconductor device therein, with at least two bus bars, each having a longitudinal contact with a portion extending along the end of lead fingers. Beng further discloses the presence

Art Unit: 2811

of a tape (Figures 1 and 3), rectangular in shape having an outer peripheral portion for attaching portions of lead finger ends (12,13) and bus bars (14,15).

5. Regarding Claim 5, Beng et al. disclose (Figure 2) (Col. 3, lines 20 – 29) a lead frame with a plurality of lead frames having an opening there between, having a plurality of inwardly extending leads (12,13) toward the opening for the semiconductor device, with at least one lead (14) having a portion extending along a length of the device periphery and extending between the device and another inwardly extending lead and a second inwardly extending lead extending along another length of the semiconductor device, wherein the leads (14,15) are power supply leads.

6. Regarding Claims 6 and 7, Beng et al. disclose (Col. 3, lines 2 – 5) that the inwardly extending leads, 14 and 15, provide a signal voltage, V_{dd} , and a ground, V_{ss} .

7. Regarding Claims 8 – 10, Beng et al. disclose (Figure 2) that that the at least one lead (14) of the plurality of inwardly extending leads surrounds the device on two adjacent portions of the periphery of the device and the lead is bifurcated (at 21).

8. Regarding Claims 12 and 13, Beng et al. disclose (Figure 2) that two of the inwardly extending leads (14,15) extends along the periphery of the device, wherein both of the leads substantially surround the device.

9. Regarding Claim 14, Beng et al. disclose (Figure 2) that the two inwardly extending leads, 14 and 15, are bifurcated (at 21 and 24) forming first and second line portions on both leads.

Art Unit: 2811

10. Regarding Claim 15, Beng et al. disclose (Figure 2) that the first portion of the at least one bifurcated inwardly extending lead (14) extends along a first portion of the periphery of the semiconductor device, and the second portion extends along a second portion of the periphery, while the first portion of the second bifurcated inwardly extending lead (15) extends along a third portion of the periphery of the device, and the second portion of the second lead extends along a fourth portion of the device periphery.

Allowed Subject Matter

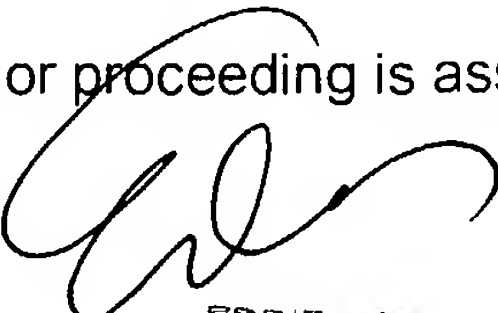
10. Claim 4 is allowed. The prior art of record do not reasonably teach or suggest, either singularly or in combination, the limitation of "a die paddle for supporting the semiconductor device thereon; and at least two bus bars, each having a portion thereof extending along at least portions of two adjacent portions of the periphery of the semiconductor device, the at least two bus bars having a portion thereof extending along the end of the each lead finger of the plurality of lead fingers."

Conclusions

11. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to **Thomas Magee**, whose telephone number is **(703) 305 5396**. The Examiner can normally be reached on Monday through Friday from 8:30AM to 5:00PM (EST). If attempts to reach the Examiner by telephone are unsuccessful, the examiner's supervisor, **Eddie Lee**, can be reached on **(703) 308-1690**. The fax number for the organization where this application or proceeding is assigned is **(703)**

872-9306.

Thomas Magee


EDDIE LEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800